UNBRIDLED LEARNING
THE VISION FOR KENTUCKY'S FUTURE

GRADE

3

KENTUCKY

K-PREP

Kentucky Performance Rating For Educational Progress

MATH SAMPLE ITEMS

Spring 2013

EVERY CHILD
PROFICIENT & PREPARED FOR SUCCESS
KENTUCKY DEPARTMENT OF EDUCATION

The following are the general guides that will be used to evaluate your responses to short-answer and extended-response questions in this test.

Kentucky Short-Answer Questions General Scoring Guide

Score Point 2	• You complete all components of the question and communicate ideas clearly. • You demonstrate an understanding of the concepts and/or processes. • You provide a correct answer using an accurate explanation as support.
Score Point 1	• You provide a partially correct answer to the question and/or address only a portion of the question. • You demonstrate a partial understanding of the concepts and/or processes.
Score Point 0	• Your answer is totally incorrect or irrelevant.
Blank	• You did not give any answer at all.

1

The total cost for 4 dance lessons is $60. Each lesson cost the same amount. Which number sentence can be used to find the cost for each dance lesson?

A $\square \div 4 = 60$

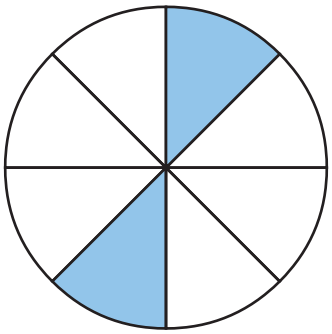
B $60 \times 4 = \square$

C $\square \div 60 = 4$

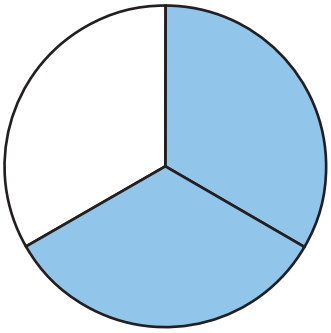
D $4 \times \square = 60$

2

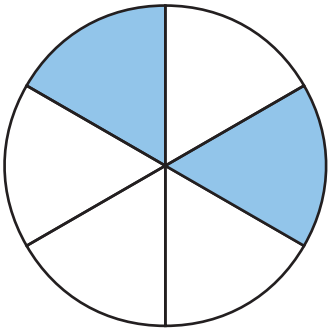
Jacob ate $\frac{2}{8}$ of a pizza, as shown in the figure. Shannon ate the same amount of pizza.



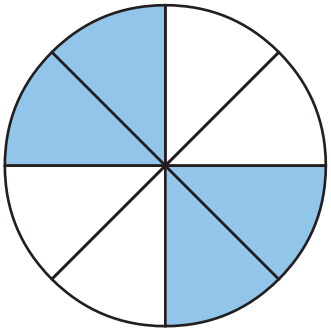
Which picture shows the amount of pizza Shannon ate?



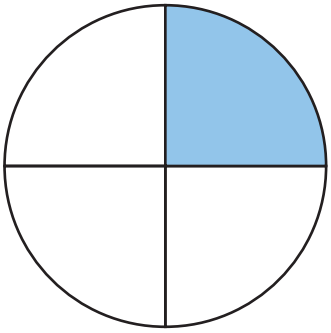
A



C



B



D

3

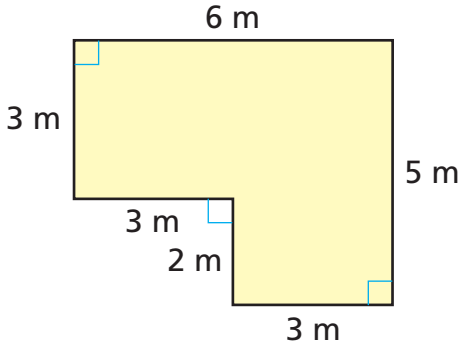
Joan bought 2 packs of juice. Each pack had 6 boxes of juice. Which number sentence tells how many boxes of juice Joan bought in all?

A $6 \div 2 = ?$
B $6 - 2 = ?$
C $2 + 6 = ?$
D $2 \times 6 = ?$

4

The figure shows the lengths of the sides of a farmer's field.

Farmer's Field

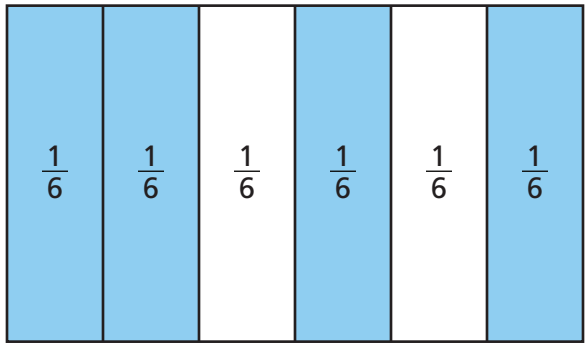


What is the area, in square meters, of the field?

A 24
B 27
C 30
D 33

5

The shaded rectangles show the parts of a bulletin board Ms. Casey has already decorated. Each of the rectangles is the same size.



What is the total part of the bulletin board Ms. Casey has already decorated?

A $\frac{1}{6}$

B $\frac{1}{3}$

C $\frac{1}{2}$

D $\frac{2}{3}$

6

Jamal will put 22 boards around his garden end-to-end.

- Each board is 1 foot long.
- The garden will be in the shape of a rectangle.
- The garden will either be 3 feet or 4 feet wide.

Which width, 3 feet or 4 feet, will give Jamal a garden with the greater area? Show your work or explain how you got your answer.

RUBRIC	
Score Point 2	• You complete all components of the question and communicate ideas clearly. • You demonstrate an understanding of the concepts and/or processes. • You provide a correct answer using an accurate explanation as support.
Score Point 1	• You provide a partially correct answer to the question and/or address only a portion of the question. • You demonstrate a partial understanding of the concepts and/or processes.
Score Point 0	• Your answer is totally incorrect or irrelevant.
Blank	• You did not give any answer at all.
Note: No part can be incomplete or incorrect and receive full credit.	

Correct Answer:
A width of 4 feet gives the greater area of the garden.

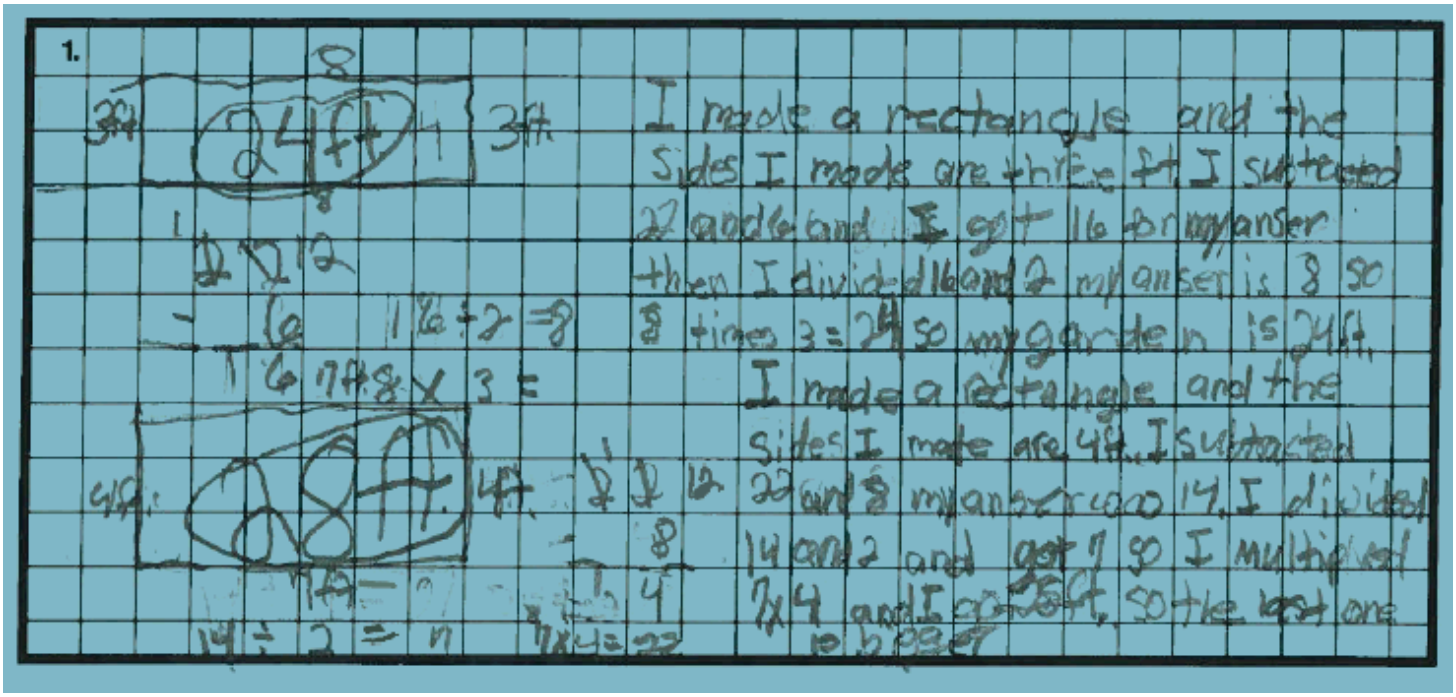
For a width of 3 feet, the length should be 8 feet, because 3 + 3 + 8 + 8 = 22.
For a width of 4 feet, the length should be 7 feet, because 4 + 4 + 7 + 7 = 22.
For a width of 3 feet, the area is 3 × 8 = 24 square feet.
For a width of 4 feet, the area is 4 × 7 = 28 square feet.
So, a width of 4 feet gives a greater area.

OR similar work or explanation

GRADE 3 — Mathematics

Annotated Student Response

SAMPLE 2-POINT RESPONSE



ANNOTATION — 2-POINT RESPONSE

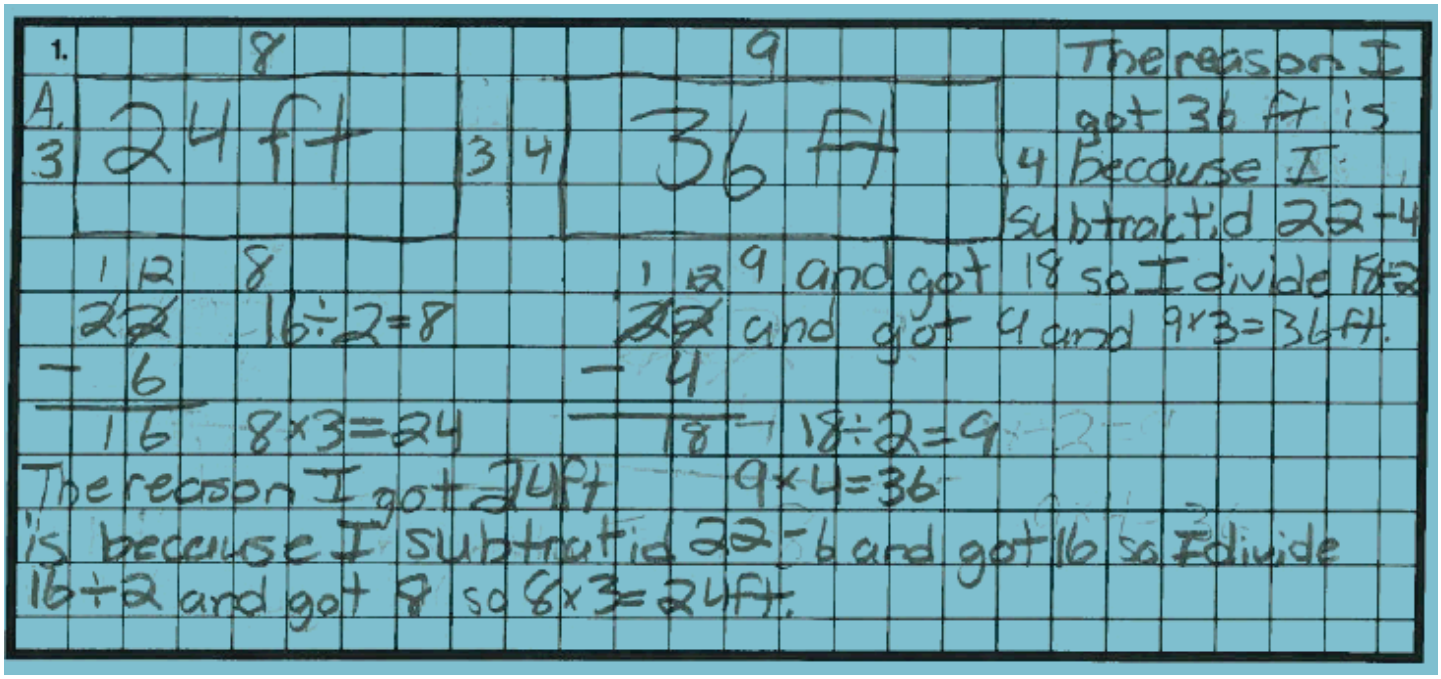
The student completes all components of the question and communicates ideas clearly. The student finds the width that will give the greater area (…*4ft*…*is beger*). The student shows both complete numerical work and gives a complete verbal explanation of the process to find the dimensions and determine area with both widths. Either the work or the explanation would be sufficient, together with the identification of the correct width, to earn full credit.

Overall, the student earns 2 points.

GRADE 3 —Mathematics

Annotated Student Response

SAMPLE 1-POINT RESPONSE



ANNOTATION — 1-POINT RESPONSE

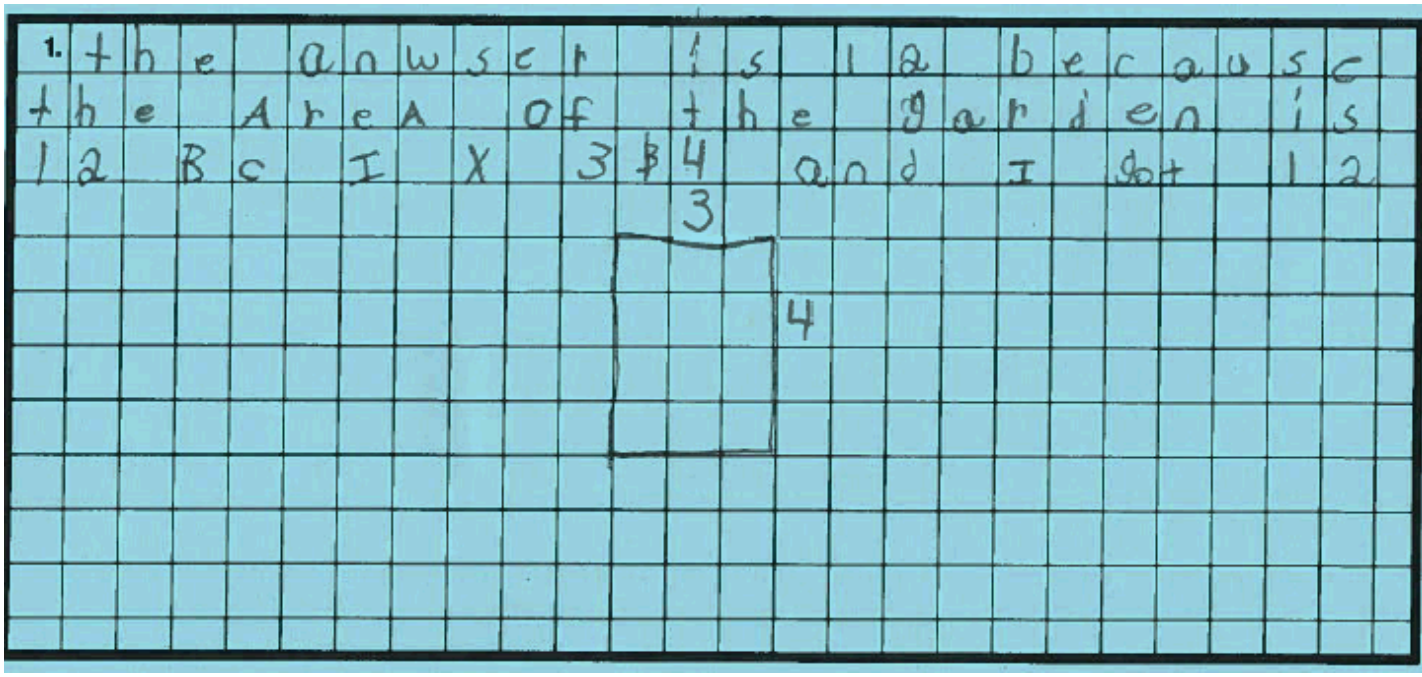
The student provides a partially correct answer to the question. The student fails to subtract one of the widths of four feet from the perimeter of 22 feet on the second rectangle leading to an incorrect length of 9 feet and an incorrect area of 36. The rest of the process is correct.

Overall, the student earns 1 point.

GRADE 3 —Mathematics

Annotated Student Response

SAMPLE 0-POINT RESPONSE



ANNOTATION – 0-POINT RESPONSE

The student's answer is totally incorrect.

Overall, the student earns 0 points.

7

Part A Copy the rectangle shown below to your answer document. Divide the copied rectangle into three parts of equal size. Write a fraction that describes the area of each part of the rectangle.

Part B Write a different fraction that is equivalent to the fraction you wrote in **part A**. Draw a new visual model to prove that your fraction is equivalent.

RUBRIC	
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Blank	• You did not give any answer at all.
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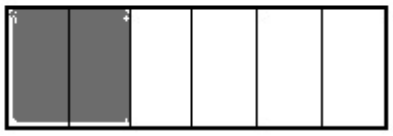
Correct Answer:

Part A Student divides the rectangle into 3 parts of equal size (or evidently equal-sized for a 3rd grader) and supplies $\frac{1}{3}$ as a fraction describing the area of each part of the rectangle. One example of a correctly divided rectangle is seen below.

Part B An equivalent fraction to the one in part A is $\frac{2}{6}$. Include any equivalent fraction to $\frac{1}{3}$.

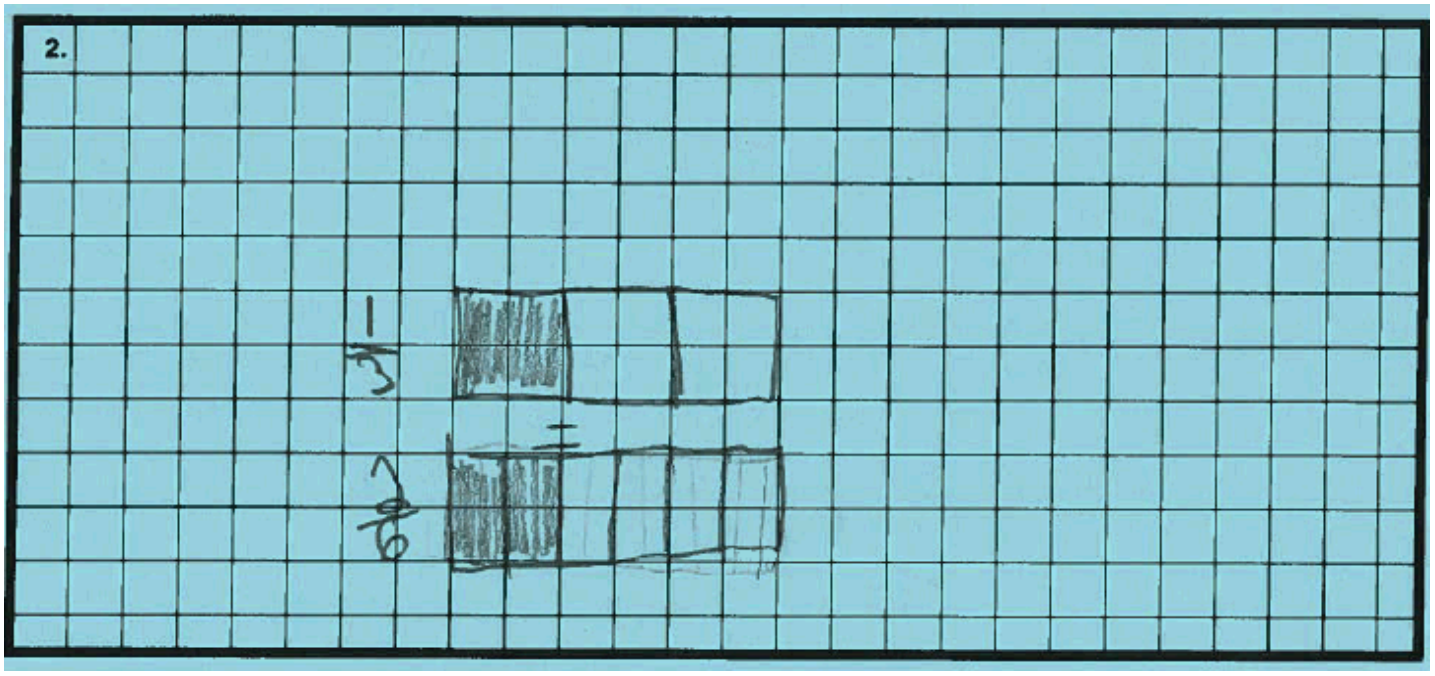


OR similar visual model

GRADE 3 — Mathematics

Annotated Student Response

SAMPLE 2-POINT RESPONSE



ANNOTATION — 2-POINT RESPONSE

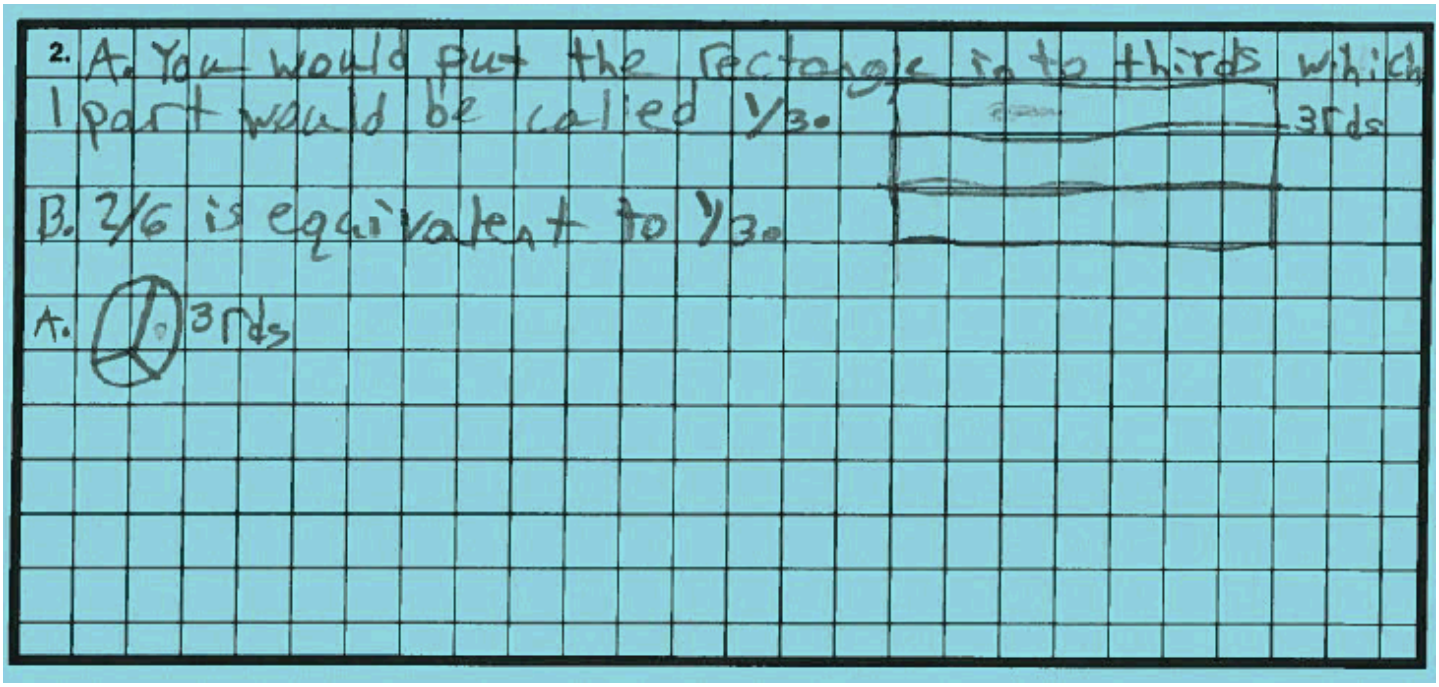
The student completes all components of the question and communicates ideas clearly. The student has drawn the first rectangle divided into three equal parts and written the fraction "*1/3*". The student then has written an equivalent fraction, "*2/6*", and drawn a new correct visual model.

Overall, the student earns 2 points.

GRADE 3 —Mathematics

Annotated Student Response

SAMPLE 1-POINT RESPONSE



ANNOTATION — 1-POINT RESPONSE

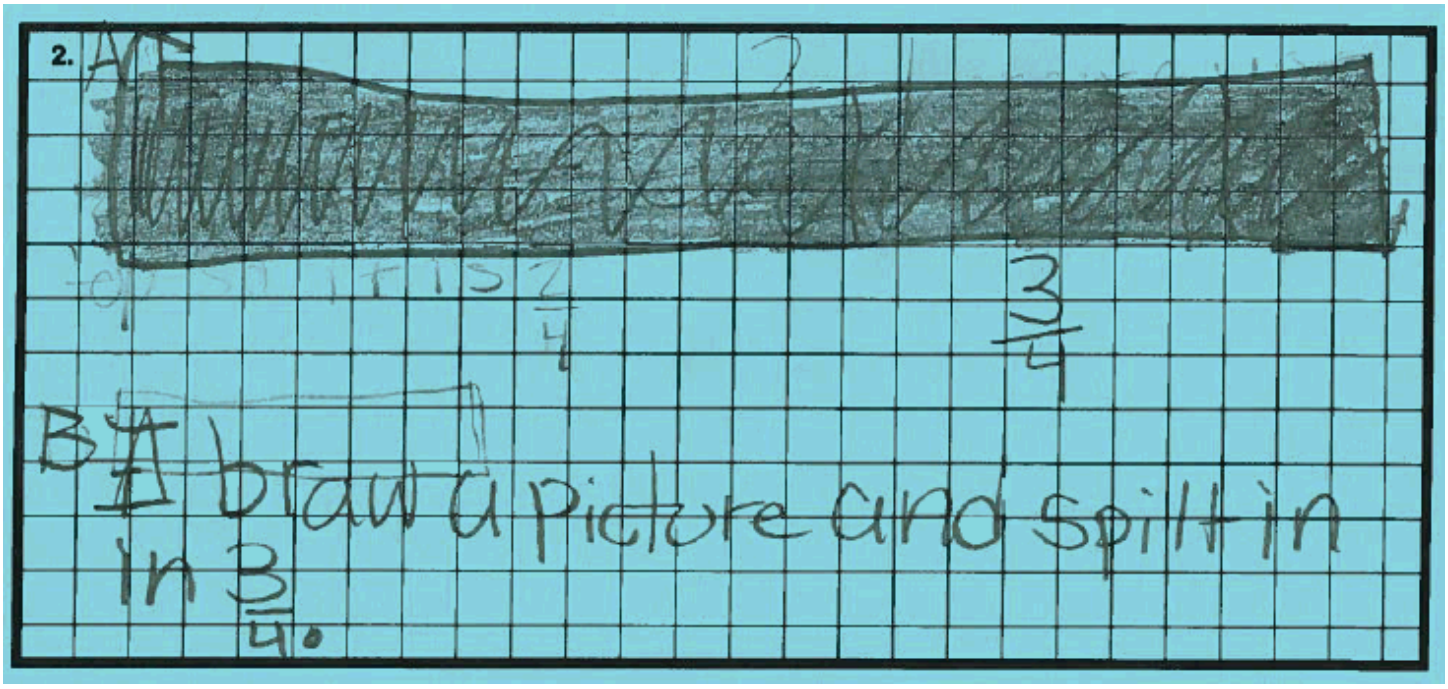
Student provides a partially correct answer to the question and addresses only a portion of the question. The student fails to draw a new visual model to prove 2/6 is equivalent to 1/3.

Overall, the student earns 1 point.

GRADE 3 —Mathematics

Annotated Student Response

SAMPLE 0-POINT RESPONSE



ANNOTATION – 0-POINT RESPONSE

The student's answer is totally incorrect.

Overall, the student earns 0 points.

Item Information

Question Number	Key	DOK*	KCAS Primary Standard**
1	D	1	3.OA.6
2	D	2	2.NF.3.a
3	D	1	3.OA.3
4	A	2	3.MD.7.d
5	D	2	3.NF.1
6	NA	3	3.MD.8
7	NA	2	3.G.2

*DOK is the abbreviation for Depth of Knowledge. Please note that DOK is associated to the complexity level of an assessment item and is not aligned to the standard. Further information regarding DOK can be accessed on the Kentucky Department of Education Web site: http://education.ky.gov/curriculum/docs/Pages/Content-Specific-Core-Content-for-Assessment-DOK-Support-Materials.aspx

**Further information regarding Common Core Standards can be accessed on the Common Core Web site: http://www.corestandards.org